

Applicant Name: Montana Tech of the University of Montana

Project Title: Restoring native plant diversity in the Upper Clark Fork Basin:
A demonstration project using novel techniques to produce sustainable and weed
resistant natural plant communities

Project Description and Benefits to Restoration:

The goal of this project is demonstrate novel ways to restore native plant species diversity in the uplands of the Upper Clark Fork Basin (UCFRB) in areas damaged by releases of hazardous substances by ARCO or its predecessors that were the subject of Montana v. ARCO. The desired future condition of upland plant communities in the UCFRB is to have sustainable plant communities that are diverse in native plant species and provide ecosystem functions such as nutrient cycling, wildlife including non-game wildlife (passerine birds) habitat, soil conservation and weed resistance. This is a three year demonstration project with objectives of increasing plant species diversity and developing plant communities resistant to invasion by exotic plant species (weeds). Weed resistance will have the additional advantage of reducing the quantity of toxic chemical released to the environment in the future and should reduce maintenance costs. Tasks will include the development of “forb sods” comprised of a diverse mixture of native forbs some grasses and some small shrubs. These sods will be planted in small patches that will serve as dispersal sources to spread diversity over larger areas. Patches may be placed on “micro-ridges” of clean soil placed on existing caps or reclaimed areas. To supply the necessary diversity we will collect seeds and propagate via tissue culture, native plants from remnant existing plant communities in the UCFRB near Butte. As we do this we will select plants that appear to be weed resistant (are healthy and growing among weeds). We will do field trials to determine the weed resistance capabilities of selected species. We will produce small weed orchards at Montana Tech for the species we use in the forb sods and for weed resistance. Montana Tech will be the lead agency in the project using weed expertise from the University of Montana. The overall budget for this project is \$1,003,200.18. Some aspects of the project are already underway, but seed collection and tissue culture will begin as soon as funding is secured. We plan to out plant several hundred square meters of forb sod during the first summer after funding is secured. Weed experimental plots will be established at the same time. At the end of three years we hope to have developed and planted, in small patches, over three acres of forb sod. We will also have an array of weed resistant plants to propagate for future reclamation/restoration projects.

2008 Application		BUDGET SUMMARY FORM				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES	\$169,015.18		\$49,586.00	\$49,586.00	\$218,601.18
2	FRINGE BENEFITS	\$51,613.00				\$51,613.00
3	CONTRACTED SERVICES	\$373,576.00		\$83,370.00	\$83,370.00	\$456,946.00
4	SUPPLIES AND MATERIALS	\$169,014.00		\$22,000.00	\$22,000.00	\$191,014.00
5	COMMUNICATIONS	\$0.00				
6	TRAVEL	\$1,500.00				\$1,500.00
7	RENT AND UTILITIES					
8	EQUIPMENT	\$17,338.00				\$17,338.00
9	MISCELLANEOUS	\$66,188.00				\$66,188.00
TOTAL		\$848,244.18		\$154,956.00	\$154,956.00	\$1,003,200.18